***ESCHERICHIA COLI* O157:H7**

Escherichia coli O157:H7, an enterohemorrhagic strain of *E.coli* (EHEC), is the agent for an illness of variable severity characterized by diarrhea (often bloody) and abdominal cramps. Hemolytic uremic syndrome (HUS) and thrombotic thrombocytopenic purpura (TTP) are serious complications. Approximately 2-7% of patients with EHEC diarrhea progress to HUS, with children under 5 years of age being at greatest risk. Transmission is mainly by ingestion of contaminated food; inadequately cooked beef, raw milk or other foods contaminated with animal feces. It also may be waterborne or transmitted person to person in families, child care centers and custodial institutions.

Laboratory Criteria for Confirmation:

- Isolation of *Escherichia coli* O157:H7 from a specimen, **OR**
- Isolation of Shiga toxin-producing *E.coli* O157:NM* from a clinical specimen, **OR**
- Isolation of Shiga toxin-producing *E. coli*, (serogroup, non-O157, or not serogrouped).

*NM—Designation for stains of *E. coli* O157:H7 that have lost the flagellar "H" antigen and are nonmotile.

Case Classification

Confirmed: A case that is laboratory confirmed.

Probable:

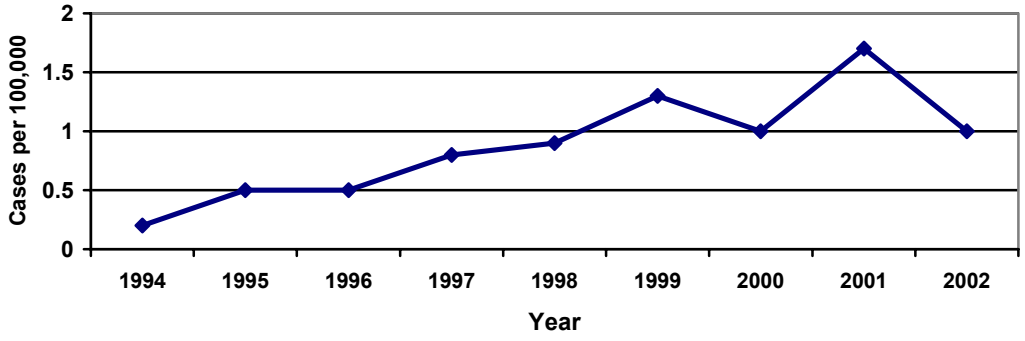
- A case with isolation of *E. coli* O157 from a clinical specimen, pending confirmation of H7 or Shiga toxin, OR
- A clinically compatible case that is epidemiologically linked to a confirmed or probable case.

Suspected: A case of postdiarrheal HUS or TTP.

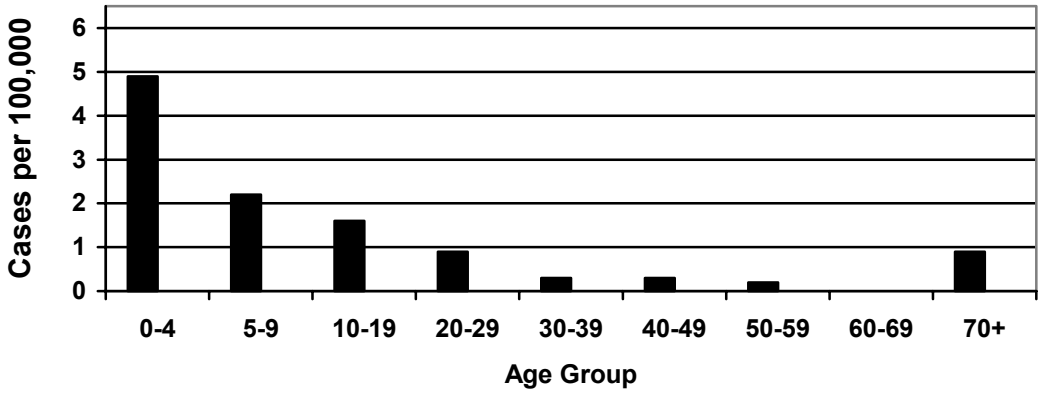
Epidemiology

Kentucky 2002		Rate per 100,000	U. S. Rate (2001) per 100,000
Cases	40	1.0	1.22
Cases by Gender			
Female	24	1.2	
Male	16	0.8	

***E. coli* O157:H7 Incidence in Kentucky, 1994-2002**



E. coli O157:H7 Age-Specific Incidence
Kentucky, 2002



The highest rates were in the 0-4 and 5-9 year age groups, 4.9 and 2.2 cases per 100,000 respectively. Cases occurred from March to October. There were 3 separate events where 2 related persons were infected from the same source. One outbreak was related to well water through Pulse Field Gel Electrophoresis (PFGE) testing.

District	Rate per 100,000
Purchase	0.5
Barren River	1.6
Lincoln Trail	2.0
North Central	0.9
Northern Kentucky	1.8
Fivco	1.5
Lake Cumberland	1.0
Bluegrass	1.6

E. coli O157:H7 Annual Incidence by District
Kentucky, 2002